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<110> Ladner, Robert Charles
Guterman, Sonia Kosow
Roberts, Bruce Lindsay
Markland, William
Arthur, Ley Charles
Rachel, Kent Baribault

<120> DIRECTED EVOLUTION OF NOVEL BINDING PROTEINS

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<141> 2001-06-29

<150> 08/993,776
<151> 1997-12-18

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<223> where Xaa can be any naturally occurring amino acid

<220>
<221> MISC_FEATURE
<222> (21)..(24)
<223> where Xaa can be any naturally occurring amino acid

<400> 37

Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Cys
1 5 10 15

Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Cys
20 25

<210> 38
<211> 26
<212> PRT
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<220>
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<220>
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<222> (2)..(7)
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<220>
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<222> (9)..(14)
<223> where Xaa can be any naturally occurring amino acid

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<220>
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<222> (21)..(25)
<223> where Xaa can be any naturally occurring amino acid

<400> 38

Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Cys
1 5 10 15

Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Cys
20 25

<210> 39
<211> 27
<212> PRT
<213> Artificial sequence

<220>
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<222> (9)..(14)
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<220>
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<223> where Xaa can be any naturally occurring amino acid

<220>
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<222> (21)..(26)
<223> where Xaa can be any naturally occurring amino acid

<400> 39

Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys Cys
1 5 10 15

Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Cys
20 25

<210> 40
<211> 14
<212> PRT
<213> Artificial sequence

<220>
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<220>
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<222> (5)..(10)
<223> where Xaa can be any naturally occurring amino acid

<400> 40

His Asn Gly Met Xaa Xaa Xaa Xaa Xaa Xaa His Asn Gly Cys
1 5 10

<210> 41

<211> 14
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (5)..(10)

<400> 41

Cys Asn Gly Met Xaa Xaa Xaa Xaa Xaa Xaa His Asn Gly His
1 5 10

<210> 42
<211> 15
<212> PRT
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<220>
<223> synthetic peptide

<220>
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<222> (4)..(4)
<223> Xaa can be any naturally occurring amino acid

<220>
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<222> (6)..(11)
<223> where Xaa can be any naturally occurring amino acid

<400> 42

His Gly Pro Xaa Met Xaa Xaa Xaa Xaa Xaa Xaa His Asn Gly Cys
1 5 10 15

<210> 43
<211> 13
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 43

Ser Asp Glu Ala Ser Gly Cys His Tyr Gly Val Leu Thr
1 5 10

<210> 44
<211> 58
<212> PRT
<213> Bos taurus

<400> 44

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Lys Ala
1 5 10 15

Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 84
<211> 58
<212> PRT
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<220>
<223> synthetic peptide

<400> 84

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Met Tyr Gly Gly Cys Gln Gly Lys Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 85
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 85

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Tyr Tyr Gly Gly Cys Trp Ala Lys Gly Asn Asn Phe Lys Ser Ala

35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 86
<211> 58
<212> PRT
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<220>
<223> synthetic peptide

<400> 86

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Met Tyr Gly Gly Cys Trp Gly Asp Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 87
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 87

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Thr Tyr Gly Gly Cys His Gly Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 88
<211> 6
<212> PRT

<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
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<222> (1)..(6)
<223> where x is an amino acid chosen from the set of [WMFYCIKDENHQ.], [PTAVG], or [SLR]

<400> 88

Xaa Xaa Xaa Xaa Xaa Xaa
1 5

<210> 89
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
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<222> (1)..(2)
<223> where n can be any nucleotide

<220>
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<222> (7)..(8)
<223> where n can be any nucleotide

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<222> (10)..(11)
<223> where n can be any nucleotide

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<222> (13)..(14)
<223> where n can be any nucleotide

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<221> MISC_FEATURE
<222> (16)..(17)
<223> where n can be any nucleotide

<220>
<221> MISC_FEATURE
<222> (22)..(23)
<223> where n can be any nucleotide

<400> 89

Asn Asn Thr Thr Gly Thr Asn Asn Thr Asn Asn Gly Asn Asn Gly Asn
1 5 10 15

Asn Thr Thr Gly Thr Asn Asn Thr
20

<210> 90
<211> 13
<212> DNA
<213> Artificial sequence

<220>
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<400> 90
ccgtcgaatc cgc 13

<210> 91
<211> 13
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 91
ggcagtttag gcg 13

<210> 92
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 92
cgtaacctcg tcatta 16

<210> 93
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 93
ccgtaggtac ctacgg 16

<210> 94
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 94

cacggctatt acggt 15

<210> 95
<211> 12
<212> DNA
<213> Artificial sequence

<220>
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<400> 95
accgtaatag cc 12

<210> 96
<211> 20
<212> DNA
<213> Artificial sequence

<220>
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<400> 96
acttcctcat gaaaaagtct 20

<210> 97
<211> 20
<212> DNA
<213> Artificial sequence

<220>
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<400> 97
acttcctcat gaaaaagtct 20

<210> 98
<211> 20
<212> DNA
<213> Artificial sequence

<220>
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<400> 98
acttccagct gaaaaagtct 20

<210> 99
<211> 20
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<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 99
acttccagct gaaaaagtct 20

<210> 100
<211> 15
<212> DNA
<213> Artificial sequence

<220>
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<400> 100
cgagggagga ggatc 15

<210> 101
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 101
cgaatcctcc tccct 15

<210> 102
<211> 33
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 102
ggtggcgagg gaggaggatc cgccgctgaa ggt 33

<210> 103
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 103
ggcggatcct cctccctcgc c 21

<210> 104
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 104
gcgagggagg aggatccgcc 20

<210> 105

<211> 25
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 105
tccctcggat cctcctccct cgccc 25

<210> 106
<211> 18
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 106

Arg Val Thr Val Tyr Thr Arg Arg Ser Val His Gly Val His Gly Arg
1 5 10 15

Met Gly

<210> 107
<211> 12
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
<221> misc_feature
<222> (5)..(5)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (7)..(8)
<223> n is a, c, g, or t

<400> 107
vytvntnnkv wg 12

<210> 108
<211> 27
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 108

Cys Cys Thr Thr Gly Thr Gly Thr Gly Gly Cys Thr Ala Thr Gly Thr
1 5 10 15

Thr Cys Cys Ala Ala Cys Gly Cys Thr Ala Thr
20 25

<210> 109
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 109
ccttgcgtcg gtttcttctc acgctat 27

<210> 110
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 110
ccttgcgtcg gtttcttcca acgctat 27

<210> 111
<211> 27
<212> DNA
<213> Artificial sequence

<220>
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<400> 111
ccttgcgtcg ctatgttccc acgctat 27

<210> 112
<211> 27
<212> DNA
<213> Artificial sequence

<220>
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<400> 112
ccttgcgtcg ctatcttccc acgctat 27

<210> 113
<211> 27
<212> DNA
<213> Artificial sequence

<220>

<223> synthetic oligonucleotide

<400> 113
ccttgcgtcg ctatcttcaa acgctct 27

<210> 114
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 114
ccttgcatcg ctttcttccc acgctat 27

<210> 115
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 115
ccttgcatcg ctttcttcca acgctat 27

<210> 116
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 116
ccttgcatcg ctttgttcaa acgctat 27

<210> 117
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 117
atgggtttct ccaaa 15

<210> 118
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 118
atggctttgt tcaaa 15

<210> 119
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 119
ttcgctatca cccca 15

<210> 120
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 120
atggctttgt tccaa 15

<210> 121
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 121
atggctatct cccca 15

<210> 122
<211> 131
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 122

Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
1 5 10 15

Val Pro Met Leu Ser Phe Ala Arg Pro Asp Phe Cys Leu Glu Pro Pro
20 25 30

Tyr Thr Gly Pro Cys Lys Ala Arg Ile Ile Arg Tyr Phe Tyr Asn Ala
35 40 45

```
Lys Ala Gly Leu Cys Gln Thr Phe Val Tyr Gly Gly Cys Arg Ala Lys
    50                  55                  60

Arg Asn Asn Phe Lys Ser Ala Glu Asp Cys Met Arg Thr Cys Gly Gly
65                  70                  75                  80

Ala Ala Glu Gly Asp Asp Pro Ala Lys Ala Ala Phe Asn Ser Leu Gln
                85                  90                  95

Ala Ser Ala Thr Glu Tyr Ile Gly Tyr Ala Trp Ala Met Val Val Val
            100                 105                 110

Ile Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr Ser
        115                 120                 125

Lys Ala Ser
    130
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<210> 123
<211> 64
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (21)..(21)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (22)..(22)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (23)..(23)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (24)..(24)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (25)..(25)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (26)..(26)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (27)..(27)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (28)..(28)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (29)..(29)
<223> where n can be T or G with equal probability

<400> 123
gcgagcgcat gcgtacctgc nnnnnnnnng ctgaaggtga tgatccggcc aaagcggccg 60

cgcc 64

<210> 124
<211> 70
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (21)..(21)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (22)..(22)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (23)..(23)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (24)..(24)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>

<221> misc_feature
<222> (25)..(25)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (26)..(26)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (27)..(27)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (28)..(28)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (29)..(29)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (30)..(30)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (31)..(31)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (32)..(32)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (33)..(33)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (34)..(34)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (35)..(35)
<223> where n can be T or G with equal probability

<400> 124

gcgagcgcat gcgtacctgc nnnnnnnnnn nnnnngctga aggtgatgat ccggccaaag 60

cggccgcgcc 70

<210> 125
<211> 76
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (21)..(21)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (22)..(22)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (23)..(23)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (24)..(24)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (25)..(25)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (26)..(26)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (27)..(27)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (28)..(28)

<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (29)..(29)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (30)..(30)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
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<222> (31)..(31)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
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<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (33)..(33)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (34)..(34)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (35)..(35)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (36)..(36)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (37)..(37)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>

<221> misc_feature
<222> (38)..(38)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (39)..(39)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (40)..(40)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (41)..(41)
<223> where n can be T or G with equal probability

<400> 125
gcgagcgcat gcgtacctgc nnnnnnnnnn nnnnnnnnnn ngctgaaggt gatgatccgg 60

ccaaagcggc cgcgcc 76

<210> 126
<211> 23
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 126
ggcgcggccg ctttggccgg atc 23

<210> 127
<211> 58
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
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<222> (29)..(29)
<223> where n can be any nucleotide with the following probabilites:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (30)..(30)
<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (31)..(31)
<223> where n can T or G with equal probability

<220>
<221> misc_feature
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(.26 T, .18 C, .26 A, and .30 G)

<220>
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<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (34)..(34)
<223> where n can T or G with equal probability

<220>
<221> misc_feature
<222> (35)..(35)
<223> where n can be any nucleotide with the following probabilites:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (36)..(36)
<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (37)..(37)
<223> where n can T or G with equal probability

<400> 127
ggccgcggta ccgatgctgt cttttgctnn nnnnnnnttc tgtctcgagc gcccgcga 58

<210> 128
<211> 63
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (28)..(28)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (29)..(29)

<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (30)..(30)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (31)..(31)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
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<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (33)..(33)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (34)..(34)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (35)..(35)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (36)..(36)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (37)..(37)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (38)..(38)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>

<221> misc_feature
<222> (39)..(39)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (40)..(40)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (41)..(41)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (42)..(42)
<223> where n can be T or G with equal probability

<400> 128
gccgcggtac cgatgctgtc ttttgctnnn nnnnnnnnnn nnttctgtct cgagcgcccg 60

cga 63

<210> 129
<211> 70
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (29)..(29)
<223> where n can be any nucleotide with the following probabilites:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (30)..(30)
<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (31)..(31)
<223> where n can T or G with equal probability

<220>
<221> misc_feature
<222> (32)..(32)
<223> where n can be any nucleotide with the following probabilites:
(.26 T, .18 C, .26 A, and .30 G)

<220>

<221> misc_feature
<222> (33)..(33)
<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (34)..(34)
<223> where n can T or G with equal probability

<220>
<221> misc_feature
<222> (35)..(35)
<223> where n can be any nucleotide with the following probabilites:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (36)..(36)
<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (37)..(37)
<223> where n can T or G with equal probability

<220>
<221> misc_feature
<222> (38)..(38)
<223> where n can be any nucleotide with the following probabilites:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (39)..(39)
<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (40)..(40)
<223> where n can T or G with equal probability

<220>
<221> misc_feature
<222> (41)..(41)
<223> where n can be any nucleotide with the following probabilites:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (42)..(42)
<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (43)..(43)
<223> where n can T or G with equal probability

<220>

<221> misc_feature
<222> (44)..(44)
<223> where n can be any nucleotide with the following probabilites:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (45)..(45)
<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (46)..(46)
<223> where n can T or G with equal probability

<220>
<221> misc_feature
<222> (47)..(47)
<223> where n can be any nucleotide with the following probabilites:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (48)..(48)
<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (49)..(49)
<223> where n can T or G with equal probability

<400> 129
ggccgcggta ccgatgctgt cttttgctnn nnnnnnnnnn nnnnnnnnnt tctgtctcga 60

gcgcccgcga 70

<210> 130
<211> 47
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 130
gagctcagag gcttactatg aagaaatctc tggttcttaa ggctagc 47

<210> 131
<211> 49
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 131
gagctctgga ggaaataaaa tgaagaaatc tctggttctt aaggctagc 49

<210> 132
<211> 41
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 132
gatcctctag agtcggcttt acactttatg cttccggctc g 41

<210> 133
<211> 37
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 133
cgagccggaa gcataaagtg taaagccgac tctagag 37

<210> 134
<211> 36
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 134
gatccactcc ccatcccccc gttgacaatt aatcat 36

<210> 135
<211> 34
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 135
cgatgattaa ttgtcaacag ggggatgggg agtg 34

<210> 136
<211> 88
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 136
gagctccatg ggagaaaata aaatgaaaca aagcacgatc gcactcttac cgttactgtt 60

taccccctgtg acaaaagccc gtccggat 88

<210> 137
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 137

Met Lys Gln Ser Thr Ile Ala Leu Leu Pro Leu Leu Phe Thr Pro Val
1 5 10 15

Thr Lys Ala Arg Pro Asp
20

<210> 138
<211> 210
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 138
ggatccggtg gcacttttcg gggaaatgtg cgcggaaccc ctatttgttt atttttctaa 60

atacattcaa atatgtatcc gctcatgaga caataaccct gataaatgct tcaataatat 120

tgaaaaagga agagtatgag tattcaacat ttccgtgtcg cccttattcc ctttttgcg 180

gcattttgcc ttcctgtttt tgctcatccg 210

<210> 139
<211> 25
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 139

Met Ser Ile Gln His Phe Arg Val Ala Leu Ile Pro Phe Phe Ala Ala
1 5 10 15

Phe Cys Leu Pro Val Phe Ala His Pro
20 25

<210> 140
<211> 25
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 140
gtttcagcgg cgccagaata gaaag 25

<210> 141
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 141
tattctggcg cccgt 15

<210> 142
<211> 19
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 142
ccggacgggc gccagaata 19

<210> 143
<211> 168
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 143
cctcgccctg gcgccgctga aggtgatgat ccggccaaag cggcctttaa ctctctgcaa 60

gcttctgcta ccgaatatat cggttacgcg tgggccatgg tggtggttat cgttggtgct 120

accatcggta tcaaactgtt taagaaattt acttcgaaag cgtcgggc 168

<210> 144
<211> 58
<212> PRT
<213> Bos taurus

<400> 144

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Lys Ala
1 5 10 15

Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 145
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 145

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Gln Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 146
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 146

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Gly
1 5 10 15

Phe Phe Ser Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 147
<211> 58
<212> PRT

<213> Bos taurus

<400> 147

Arg Pro Asp Phe Cys Leu Gly Pro Pro Tyr Thr Gly Pro Cys Val Gly
1 5 10 15

Phe Phe Gln Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 148
<211> 58
<212> PRT
<213> Bos taurus

<400> 148

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 149
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 149

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Ile Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala

35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 150
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 150

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Ile Phe Lys Arg Leu Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 151
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 151

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Ile Ala
1 5 10 15

Phe Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 152
<211> 58
<212> PRT

<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 152

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Ile Ala
1 5 10 15

Phe Phe Gln Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 153
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 153

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Ile Ala
1 5 10 15

Leu Phe Lys Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys Met Gly Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 154
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 154

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Met Gly
1 5 10 15

```
Phe Ser Lys Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
            20                  25                  30

Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
        35                  40                  45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
    50                  55
```

<210> 155
<211> 58
<212> PRT
<213> Dendroaspis polylepis polylepis

<400> 155

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Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Met Ala
1               5                   10                  15

Leu Phe Lys Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
            20                  25                  30

Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
        35                  40                  45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
    50                  55
```

<210> 156
<211> 58
<212> PRT
<213> Dendroaspis polylepis polylepis

<400> 156

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Arg Pro Asp Phe Cys Leu Glu Pro Pro Asn Thr Gly Pro Cys Phe Ala
1               5                   10                  15

Ile Thr Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
            20                  25                  30

Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
        35                  40                  45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
    50                  55
```

<210> 157
<211> 58
<212> PRT

<213> Hemachatus hemachates

<400> 157

```
Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Met Ala
1               5                   10                  15

Leu Phe Gln Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
            20                  25                  30

Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
        35                  40                  45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
    50                  55
```

<210> 158
<211> 58
<212> PRT
<213> Naja nivea

<400> 158

```
Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Met Ala
1               5                   10                  15

Ile Ser Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
            20                  25                  30

Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Ala
        35                  40                  45

Gly Asp Cys Met Arg Thr Cys Gly Gly Ala
    50                  55
```

<210> 159
<211> 58
<212> PRT
<213> Vipera russelli

<400> 159

```
Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1               5                   10                  15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
            20                  25                  30

Phe Leu Tyr Gly Gly Cys Lys Gly Lys Gly Asn Asn Phe Lys Ser Ala
        35                  40                  45
```

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 160
<211> 58
<212> PRT
<213> Caretta caretta

<400> 160

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Glu Tyr Gly Gly Cys Trp Ala Lys Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 161
<211> 58
<212> PRT
<213> Helix pomania

<400> 161

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Gly Tyr Ala Gly Cys Arg Ala Lys Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 162
<211> 58
<212> PRT
<213> Dendroaspis angusticeps

<400> 162

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr

20 25 30

Phe Glu Tyr Gly Gly Cys His Ala Glu Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 163
<211> 58
<212> PRT
<213> Dendroaspis angusticeps

<400> 163

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Leu Tyr Gly Gly Cys Trp Ala Gln Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 164
<211> 58
<212> PRT
<213> Dendroaspis polylepis

<400> 164

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Arg Tyr Gly Gly Cys Leu Ala Glu Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 165
<211> 58
<212> PRT
<213> Dendroaspis polylepis

<400> 165

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Asp Tyr Gly Gly Cys His Ala Asp Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 166
<211> 58
<212> PRT
<213> Vipera ammodytes

<400> 166

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Lys Tyr Gly Gly Cys Leu Ala His Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 167
<211> 58
<212> PRT
<213> Vipera ammodytes

<400> 167

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Thr Tyr Gly Gly Cys Trp Ala Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 168
<211> 58
<212> PRT
<213> Bungarus fasciatus

<400> 168

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Asn Tyr Gly Gly Cys Glu Gly Lys Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 169
<211> 58
<212> PRT
<213> Anemonia sulcata

<400> 169

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Gln Tyr Gly Gly Cys Glu Gly Tyr Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 170
<211> 58
<212> PRT
<213> Homo sapiens

<400> 170

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Gln Tyr Gly Gly Cys Leu Gly Glu Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 171
<211> 58
<212> PRT
<213> Homo sapiens

<400> 171

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe His Tyr Gly Gly Cys Trp Gly Gln Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 172
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 172

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe His Tyr Gly Gly Cys Trp Gly Glu Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 173
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 173

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Lys Tyr Gly Gly Cys Trp Gly Lys Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 174
<211> 58
<212> PRT
<213> Bos taurus

<400> 174

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Lys Tyr Gly Gly Cys Trp Gly Lys Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 175
<211> 58
<212> PRT
<213> Tachypleus tridentatus

<400> 175

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Pro Tyr Gly Gly Cys Trp Ala Lys Gly Asn Asn Phe Lys Leu Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 176
<211> 58
<212> PRT
<213> Bombyx mori

<400> 176

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Lys Tyr Gly Gly Cys Trp Gly His Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 177
<211> 58
<212> PRT
<213> Bos taurus

<400> 177

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Asn Tyr Gly Gly Cys Trp Gly Lys Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 178
<211> 58
<212> PRT
<213> Bos taurus

<400> 178

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

```
Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
            20                  25                  30

Phe Thr Tyr Gly Gly Cys Leu Gly His Gly Asn Asn Phe Lys Ser Ala
        35                  40                  45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
    50                  55
```

<210> 179
<211> 58
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 179

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Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1               5                   10                  15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
            20                  25                  30

Phe Thr Tyr Gly Gly Cys Leu Gly Tyr Gly Asn Asn Phe Lys Ser Ala
        35                  40                  45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
    50                  55
```

<210> 180
<211> 58
<212> PRT
<213> Bos taurus

<400> 180

```
Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1               5                   10                  15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
            20                  25                  30

Phe Lys Tyr Gly Gly Cys Trp Ala Glu Gly Asn Asn Phe Lys Ser Ala
        35                  40                  45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
    50                  55
```

<210> 181
<211> 58
<212> PRT
<213> Bos taurus

<400> 181

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Gly Tyr Gly Gly Cys Trp Gly Glu Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 182
<211> 58
<212> PRT
<213> Bos taurus

<400> 182

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Glu Tyr Gly Gly Cys Trp Ala Asn Gly Asn Asn Phe Lys Ser Ala
35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 183
<211> 58
<212> PRT
<213> Bos taurus

<400> 183

Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys Val Ala
1 5 10 15

Met Phe Pro Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln Thr
20 25 30

Phe Val Tyr Gly Gly Cys His Gly Asp Gly Asn Asn Phe Lys Ser Ala

35 40 45

Glu Asp Cys Met Arg Thr Cys Gly Gly Ala
50 55

<210> 184
<211> 13
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (5)..(9)
<223> where n can be any nucleotide

<400> 184
ggccnnnnng gcc 13

<210> 185
<211> 536
<212> DNA
<213> Bos taurus

<400> 185
cggaccgtat ccaggcttta cactttatgc ttccggctcg tataattgga attgtgagcg 60

gataacaatt cctaggaggc tcactatgaa gaaatctctg gttcttaagg ctagcgttgc 120

tgtcgcgacc ctggtaccga tgctgtcttt tgctcgtccg gatttctgtc tcgagccgcc 180

atatactggg ccctgcaaag cgcgcatcat ccgttatttc tacaacgcta aagcaggcct 240

gtgccagacc tttgtatacg gtggttgccg tgctaagcgt aacaacttta aatcggccga 300

agattgcatg cgtacctgcg gtggcgccgc tgaaggtgat gatccggcca aagcggcctt 360

taactctctg caagcttctg ctaccgaata tatcggttac gcgtgggcca tggtggtggt 420

tatcgttggt gctaccatcg gtatcaaact gtttaagaaa tttacttcga aagcgtctta 480

atagtgaggt taccagtcta agcccgccta atgagcgggc ttttttttc ctgagg 536

<210> 186
<211> 536
<212> DNA
<213> Bos taurus

<400> 186
cggaccgtat ccaggcttta cactttatgc ttccggctcg tataattgga attgtgagcg 60

gataacaatt cctaggaggc tcactatgaa gaaatctctg gttcttaagg ctagcgttgc 120

tgtcgcgacc ctggtaccga tgctgtcttt tgctcgtccg gatttctgtc tcgagccgcc 180

atatactggg ccctgcaaag cgcgcatcat ccgttatttc tacaacgcta aagcaggcct 240

gtgccagacc tttgtatacg gtggttgccg tgctaagcgt aacaacttta aatcggccga 300

agattgcatg cgtacctgcg gtggcgccgc tgaaggtgat gatccggcca aagcggcctt 360

taactctctg caagcttctg ctaccgaata tatcggttac gcgtgggcca tggtggtggt 420

tatcgttggt gctaccatcg gtatcaaact gtttaagaaa tttacttcga aagcgtctta 480

atagtgaggt taccagtcta agcccgccta atgagcgggc ttttttttttc ctgagg 536

<210> 187
<211> 7
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> where x is a stop encoded by TAA

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> where x is a stop encoded by TAG

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> where x is a stop encoded by TGA

<400> 187

Ser Lys Ala Ser Xaa Xaa Xaa
1 5

<210> 188
<211> 176
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 188
ccgtccgtcg gaccgtatcc aggctttaca ctttatgctt ccggctcgta taatgtgtgg 60

aattgtgagc ggataacaat tcctagggcc gctccttcga aagcgtctta atagtgaggt 120

taccagtcta agcccgccta atgagcgggc ttttttttttc ctgaggcagg tgagcg 176

<210> 189
<211> 176

<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 189
ccgtccgtcg gaccgtatcc aggctttaca ctttatgctt ccggctcgta taatgtgtgg 60

aattgtgagc ggataacaat tcctagggcc gctccttcga aagcgtctta atagtgaggt 120

taccagtcta agcccgccta atgagcgggc ttttttttttc ctgaggcagg tgagcg 176

<210> 190
<211> 89
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 190
cgctcacctg cctcggaaaa aaaaaagccc gctcattagg cgggcttaga ctggtaacct 60

cactattaag acgctttcga aggagcggc 89

<210> 191
<211> 171
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 191
gcaccaacgc ctaggaggct cactatgaag aaatctctgg ttcttaaggc tagcgttgct 60

gtcgcgaccc tggtaccgat gctgtctttt gctcgtccgg atttctgtct cgagccgcca 120

tatactgggc cctgcaaagc gcgcatcatc cgtacttcga aagcggctgc g 171

<210> 192
<211> 45
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 192

Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
1 5 10 15

Val Pro Met Leu Phe Ala Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr
20 25 30

Thr Gly Pro Cys Lys Ala Arg Ile Ile Arg Thr Ser Lys
35 40 45

<210> 193
<211> 171
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 193
gcaccaacgc ctaggaggct cactatgaag aaatctctgg ttcttaaggc tagcgttgct 60

gtcgcgaccc tggtaccgat gctgtctttt gctcgtccgg atttctgtct cgagccgcca 120

tatactgggc cctgcaaagc gcgcatcatc cgtacttcga aagcggctgc g 171

<210> 194
<211> 96
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 194
cgcagccgct ttcgaagtac ggatgatgcg cgctttacgg ggcccagtat atggcggctc 60

gagacagaaa tccggacgag caaaagacag catcgg 96

<210> 195
<211> 165
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 195
ccctgcacag cgcgcatcat ccgttatttc tacaacgcta aagcaggcct gtgccagacc 60

tttgtatacg gtggttgccg tgctaagcgt aacaacttta aatcggccga agattgcatg 120

cgtacctgcg gtggcgccgc tgaatttact tcgaaagcgt cgccg 165

<210> 196
<211> 46
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 196

Ala Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys Gln

1 5 10 15

Thr Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser
20 25 30

Ala Glu Asp Cys Met Arg Thr Cys Gly Gly Ala Thr Ser Lys
35 40 45

<210> 197
<211> 165
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 197
ccctgcacag cgcgcatcat ccgttatttc tacaacgcta aagcaggcct gtgccagacc 60

tttgtatacg gtggttgccg tgctaagcgt aacaacttta aatcggccga agattgcatg 120

cgtacctgcg gtggcgccgc tgaatttact tcgaaagcgt cgccg 165

<210> 198
<211> 97
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 198
cggcgacgct ttcgaagtaa attctgcggc gccaccgcag gtacgcatgc aatcttcggc 60

cgatttaaag ttgttacgct tagcacggca accaccg 97

<210> 199
<211> 96
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 199
cgcagccgct ttcgaagtac ggatgatgcg cgctttacgg ggcccagtat atggcggctc 60

gagacagaaa tccggacgag caaaagacag catcgg 96

<210> 200
<211> 50
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 200

Gly Ala Ala Glu Gly Asp Asp Pro Ala Lys Ala Ala Phe Asn Ser Leu
1 5 10 15

Gln Ala Ser Ala Thr Glu Tyr Ile Gly Tyr Ala Trp Ala Met Val Val
20 25 30

Val Ile Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr
35 40 45

Ser Lys
50

<210> 201
<211> 96
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 201
cgcagccgct ttcgaagtac ggatgatgcg cgctttacgg ggcccagtat atggcggctc 60

gagacagaaa tccggacgag caaaagacag catcgg 96

<210> 202
<211> 93
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 202
tcaagacgct ttcgaagtaa atttcttaaa cagtttgata ccgatggtag caccaacgat 60

aaccaccacc atggcccacg cgtaaccgat ata 93

<210> 203
<211> 41
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> where Xaa is encoded by a codon where residue 1 can be (.26 T, .18 C, .26 A, and .30 G), residue 2 can be (.22 T, .16 C, .40 A, and .22 G), and residue 3 can be equal probability of T or G.

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> where Xaa is encoded by a codon where residue 1 can be (.26 T, .18 C, .26 A, and .30 G), residue 2 can be (.22 T, .16 C, .40 A, and .22 G), and residue 3 can be equal probability of T or G.

<220>
<221> MISC_FEATURE
<222> (16)..(16)
<223> where Xaa is encoded by a codon where residue 1 can be (.26 T, .18 C, .26 A, and .30 G), residue 2 can be (.22 T, .16 C, .40 A, and .22 G), and residue 3 can be equal probability of T or G.

<220>
<221> MISC_FEATURE
<222> (18)..(18)
<223> where Xaa is encoded by a codon where residue 1 can be (.26 T, .18 C, .26 A, and .30 G), residue 2 can be (.22 T, .16 C, .40 A, and .22 G), and residue 3 can be equal probability of T or G.

<220>
<221> MISC_FEATURE
<222> (23)..(23)
<223> where Xaa is encoded by a codon where residue 1 can be (.26 T, .18 C, .26 A, and .30 G), residue 2 can be (.22 T, .16 C, .40 A, and .22 G), and residue 3 can be equal probability of T or G.

<220>
<221> MISC_FEATURE
<222> (37)..(37)
<223> where Xaa is encoded by a codon where residue 1 can be (.26 T, .18 C, .26 A, and .30 G), residue 2 can be (.22 T, .16 C, .40 A, and .22 G), and residue 3 can be equal probability of T or G.

<400> 203

Gly Pro Cys Lys Ala Xaa Ile Xaa Arg Tyr Phe Tyr Asn Ala Lys Xaa
1 5 10 15

Gly Xaa Cys Gln Thr Phe Xaa Tyr Gly Gly Cys Arg Ala Lys Arg Asn
20 25 30

Asn Phe Lys Ser Xaa Glu Asp Cys Met
35 40

<210> 204
<211> 130
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (22)..(22)

<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (23)..(23)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (24)..(24)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (28)..(28)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (29)..(29)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (30)..(30)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (52)..(52)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (53)..(53)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (54)..(54)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (58)..(58)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>

<221> misc_feature
<222> (59)..(59)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (60)..(60)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (73)..(73)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (74)..(74)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (75)..(75)
<223> where n can be T or G with equal probability

<220>
<221> misc_feature
<222> (115)..(115)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (116)..(116)
<223> where nwhere Xaa can be any naturally occurring amino acid with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (117)..(117)
<223> where n can be T or G with equal probability

<400> 204
caccctgggc cctgcaaagc gnnnatcnnn cgttatttct acaacgctaa annnggtnnn 60

tgccagacct tcnnntacgg tggttgccgt gctaagcgta acaactttaa atctnnngag 120

gattgcatgc 130

<210> 205
<211> 78
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (22)..(22)
<223> where n is a nucleotide with equal probability of being C or A

<220>
<221> misc_feature
<222> (23)..(23)
<223> where n is a nucleotide complementary to a nucleotide that can be any nucleotide with the following probabilities: (.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (24)..(24)
<223> where n is a nucleotide complementary to a nucleotide that can be any nucleotide with the following probabilities: (.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (64)..(64)
<223> where n is a nucleotide with equal probability of being C or A

<220>
<221> misc_feature
<222> (65)..(65)
<223> where n is a nucleotide complementary to a nucleotide that can be any nucleotide with the following probabilities: (.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (66)..(66)
<223> where n is a nucleotide complementary to a nucleotide that can be any nucleotide with the following probabilities: (.26 T, .18 C, .26 A, and .30 G)

<400> 205
ccacccacgc atgcaatcct cnnncgattt aaagttgtta cgcttagcac ggcaaccacc 60

gtannngaag gtctggca 78

<210> 206
<211> 53
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 206

Leu Glu Pro Pro Tyr Thr Gly Pro Cys Lys Ala Asp Ile Gln Arg Tyr
1 5 10 15

Phe Tyr Asn Ala Lys Glu Gly Leu Cys Gln Thr Phe Ser Tyr Gly Gly
20 25 30

Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Trp Glu Asp Cys Met Arg
35 40 45

Thr Cys Gly Gly Ala
50

<210> 207
<211> 159
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 207
ctcgagccgc catatactgg gccctgcaaa gcggatatcc agcgttattt ctacaacgct 60

aaagagggcc tgtgccagac cttttcgtac ggtggttgcc gtgctaagcg taacaacttt 120

aaatcgtggg aagattgcat gcgtacctgc ggtggcgcc 159

<210> 208
<211> 41
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> where Xaa is an amino acid encoded by equal probability of CAA, CGA, AAA or AGA

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> where Xaa is an amino acid encoded by equal probability of AAA, GAA, ATA or GTA

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> where Xaa is an amino acid encoded by a codon where the nucleotide in position 1 has an equal possibility of being A or G, the nucleotide in position 2 has an equal possiblility of being C, A, or G, and the nucleotide in position 3 can be T or G

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> where Xaa is an amino acid encoded by a codon with equal possibility of being TTT or TAT

<220>
<221> MISC_FEATURE
<222> (17)..(17)
<223> where Xaa is encoded by a codon where residue 1 can be (.26 T, .18 C, .26 A, and .30 G), residue 2 can be (.22 T, .16 C, .40 A, and .22 G), and residue 3 can be equal probability of T or G.

<220>
<221> MISC_FEATURE
<222> (20)..(21)
<223> where Xaa is encoded by a codon where residue 1 can be (.26 T, .18 C, .26 A, and .30 G), residue 2 can be (.22 T, .16 C, .40 A, and .22 G), and residue 3 can be equal probability of T or G.

<220>
<221> MISC_FEATURE
<222> (38)..(38)
<223> where Xaa is encoded by a codon where residue 1 can be (.26 T, .18 C, .26 A, and .30 G), residue 2 can be (.22 T, .16 C, .40 A, and .22 G), and residue 3 can be equal probability of T or G.

<400> 208

Gly Pro Cys Xaa Ala Asp Xaa Gln Xaa Xaa Phe Tyr Asn Ala Lys Glu
1 5 10 15

Xaa Leu Cys Xaa Xaa Phe Ser Tyr Gly Gly Cys Arg Ala Lys Arg Asn
20 25 30

Asn Phe Lys Ser Trp Xaa Asp Cys Met
35 40

<210> 209
<211> 132
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (18)..(18)
<223> where n has an equal probability of being C or A

<220>
<221> misc_feature
<222> (19)..(19)
<223> where n has an equal probability of being G or A

<220>
<221> misc_feature
<222> (27)..(27)
<223> where n has an equal probability of being G or A

<220>
<221> misc_feature

<222> (28)..(28)
<223> where n has an equal probability of being T or A

<220>
<221> misc_feature
<222> (33)..(33)
<223> where n has an equal probability of being G or A

<220>
<221> misc_feature
<222> (34)..(34)
<223> where n has an equal probability of being G, C, or A

<220>
<221> misc_feature
<222> (35)..(35)
<223> where n has an equal probability of being G or T

<220>
<221> misc_feature
<222> (37)..(37)
<223> where n has an equal probability of being A or T

<220>
<221> misc_feature
<222> (57)..(57)
<223> where n can be any nucleotide, with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (58)..(58)
<223> where n can be any nucleotide, with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (59)..(59)
<223> where n has an equal probability of being T or G

<220>
<221> misc_feature
<222> (66)..(66)
<223> where n can be any nucleotide, with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (67)..(67)
<223> where n can be any nucleotide, with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (68)..(68)
<223> where n has an equal probability of being T or G

<220>
<221> misc_feature
<222> (69)..(69)
<223> where n can be any nucleotide, with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (70)..(70)
<223> where n can be any nucleotide, with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (71)..(71)
<223> where n has an equal probability of being T or G

<220>
<221> misc_feature
<222> (120)..(120)
<223> where n can be any nucleotide, with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (121)..(121)
<223> where n can be any nucleotide, with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (122)..(122)
<223> where n has an equal probability of being T or G

<400> 209
cggcacgcgg gccctgcnna gcggatnnac agnnntnttt ctacaacgct aaagagnnnc 60

tgtgcnnnnn nttttcgtac ggtggttgcc gtgctaagcg taacaacttt aaatcgtggn 120

nngattgcat gc 132

<210> 210
<211> 61
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (19)..(19)
<223> where n is a nucleotide with equal chance being C or A

<220>
<221> misc_feature
<222> (20)..(20)
<223> where n is a nucleotide complementary to a nucleotide having the
probabilities : .22 T, .16 C, .40 A, or .22 G

<220>
<221> misc_feature
<222> (21)..(21)
<223> where n is a nucleotide complementary to a nucleotide having the
probabilities : .26 T, .18 C, .26A, or .30 G

<400> 210
cgtccagcgc atgcaatcnn nccacgattt aaagttgtta cgcttagcac ggcaaccacc 60

g 61

<210> 211
<211> 53
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 211

Leu Glu Pro Pro Tyr Thr Gly Pro Cys Glu Ala Asp Val Gln Asn Phe
1 5 10 15

Phe Tyr Asn Ala Lys Glu Phe Leu Cys Ser Ala Phe Ser Tyr Gly Gly
20 25 30

Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Trp Gln Asp Cys Met Arg
35 40 45

Thr Cys Gly Gly Ala
50

<210> 212
<211> 159
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 212
ctcgagccgc catatactgg gccctgcgag gcggatgttc agaatttttt ctacaacgct 60

aaagagtttc tgtgctctgc tttttcgtac ggtggttgcc gtgctaagcg taacaacttt 120

aaatcgtggc aggattgcat gcgtacctgc ggtggcggc 159

<210> 213
<211> 36
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> where Xaa is an amino acid with encoded by AAG, ACG, CAG, CCG, GAG,

or GCG with equal probability.

<220>
<221> MISC_FEATURE
<222> (6)..(6)
<223> where Xaa is an amino acid with encoded by AAG, ACG, CAG, CCG, GAG, or GCG with equal probability.

<220>
<221> MISC_FEATURE
<222> (12)..(12)
<223> where Xaa is an amino acid encoded by a codon where the nucleotide in position 1 has an equal possibility of being A or G, the nucleotide in position 2 has an equal possiblility of being C, A, or G, and the nucleotide in position 3 can be T or G

<220>
<221> MISC_FEATURE
<222> (16)..(16)
<223> where X is an amino acid encoded by TTT, TATK TGT, TAG, TGG, or TTG with equal probability.

<220>
<221> MISC_FEATURE
<222> (22)..(22)
<223> where Xaa is an amino acid encoded by AAG, CAG, or GAG with equal probability

<220>
<221> MISC_FEATURE
<222> (24)..(24)
<223> where Xaa is an amino acid encoded by TTT, TTG, ATT, ATG, CTT, CTG, GTT, or GTG with equal probability

<220>
<221> MISC_FEATURE
<222> (27)..(27)
<223> where Xaa is an amino acid encoded by a codon where the nucleotide in position 1 has an equal possibility of being A or G, the nucleotide in position 2 has an equal possiblility of being C, A, or G, and the nucleotide in position 3 can be T or G

<220>
<221> MISC_FEATURE
<222> (29)..(29)
<223> where Xaa is an amino acid encoded by a codon where the nucleotide in position 1 has an equal possibility of being A or G, the nucleotide in position 2 has an equal possiblility of being C, A, or G, and the nucleotide in position 3 can be T or G

<400> 213

Leu Glu Pro Xaa Tyr Xaa Gly Pro Cys Glu Ala Xaa Val Gln Asn Xaa
1 5 10 15

Phe Tyr Asn Ala Lys Xaa Phe Xaa Cys Ser Xaa Phe Xaa Tyr Gly Gly
20 25 30

Cys Arg Ala Lys
35

<210> 214
<211> 117
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (18)..(18)
<223> where n has an equal probability of being A, C, or G

<220>
<221> misc_feature
<222> (19)..(19)
<223> where n has an equal probability of being C or A

<220>
<221> misc_feature
<222> (24)..(24)
<223> where n has an equal probability of being A, C, or G

<220>
<221> misc_feature
<222> (25)..(25)
<223> where n has an equal probability of being C or A

<220>
<221> misc_feature
<222> (42)..(42)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (43)..(43)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (44)..(44)
<223> where n has an equal probability of being G, or T

<220>
<221> misc_feature
<222> (55)..(55)
<223> where n has an equal probability of being A, G, or T

<220>
<221> misc_feature
<222> (56)..(56)
<223> where n has an equal probability of being G, or T

<220>
<221> misc_feature
<222> (72)..(72)
<223> where n has an equal probability of being A, C, or G

<220>
<221> misc_feature
<222> (78)..(78)
<223> where n has an equal probability of being A, C, G or T

<220>
<221> misc_feature
<222> (80)..(80)
<223> where n has an equal probability of being G, or T

<220>
<221> misc_feature
<222> (87)..(87)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (88)..(88)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (89)..(89)
<223> where n has an equal probability of being G, or T

<220>
<221> misc_feature
<222> (93)..(93)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (94)..(94)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (95)..(95)
<223> where n has an equal probability of being G, or T

<400> 214
cgagcctgct cgagccgnng tatnnggggc cctgcgaggc gnnngttcag aattnnttct 60

acaacgccaa gnagtttntn tgctctnnnt ttnnntacgg tggttgccgt gctaagc 117

<210> 215
<211> 67
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature

<222> (31)..(31)
<223> where n has an equal possibility of being C or A

<220>
<221> misc_feature
<222> (32)..(32)
<223> where n is a nucleotide complimentary to a residue that can be any nucleotide with the following probabilities: (.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (33)..(33)
<223> where n is a nucleotide complimentary to a residue that can be any nucleotide with the following probabilities: (.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (37)..(37)
<223> where n has an equal possibility of being C or A

<220>
<221> misc_feature
<222> (38)..(38)
<223> where n is a nucleotide complimentary to a residue that can be any nucleotide with the following probabilities: (.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (39)..(39)
<223> where n is a nucleotide complimentary to a residue that can be any nucleotide with the following probabilities: (.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (46)..(46)
<223> where n has an equal possibility of being C or A

<220>
<221> misc_feature
<222> (48)..(48)
<223> where n has an equal possibility of being C, A, G, or T

<220>
<221> misc_feature
<222> (54)..(54)
<223> where n has an equal possibility of being T, G, or C

<400> 215
cggccagcgc ttagcacggc aaccaccgta nnnaaannna gagcananaa actncttggc 60

gttgtag 67

<210> 216
<211> 53
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 216

Leu Glu Pro Glu Tyr Gln Gly Pro Cys Glu Ala Ala Val Gln Asn Trp
1 5 10 15

Phe Tyr Asn Ala Lys Gln Phe Met Cys Ser Leu Phe His Tyr Gly Gly
20 25 30

Cys Arg Ala Lys Arg Asn Asn Phe Lys Ser Trp Gln Asp Cys Met Arg
35 40 45

Thr Cys Gly Gly Ala
50

<210> 217
<211> 159
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 217
ctcgagccgg agtatcaggg gccctgcgag gcggctgttc agaattggtt ctacaacgct 60

aaacagttta tgtgctctct ttttcattac ggtggttgcc gtgctaagcg taacaacttt 120

aaatcgtggc aggattgcat gcgtacctgc ggtggcgcc 159

<210> 218
<211> 582
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 218
gaattcgagc tcggtacccg gggatcctct agagtcggct ttacacttta tgcttccggc 60

tcgtataatg tgtggaattg tgagcgctca caattgagct cagaggctta ctatgaagaa 120

atctctggtt cttaaggcta gcgttgctgt cgcgaccctg gtacctatgt tgtccttcgc 180

tcgtccggat ttctgtctcg agccaccata cactgggccc tgcaaagcgc gcatcatccg 240

ctatttctac aatgctaaag caggcctgtg ccagaccttt gtatacggtg gttgccgtgc 300

taagcgtaac aactttaaat cggccgaaga ttgcatgcgt acctgcggtg gcgccgctga 360

aggtgatgat ccggccaagg cggccttcaa ttctctgcaa gcttctgcta ccgagtatat 420

tggttacgcg tgggccatgg tggtggttat cgttggtgct accatcggga tcaaactgtt 480

caagaagttt acttcgaagg cgtcttaatg atagggttac cagtctaagc ccgcctaatg 540

agcgggcttt ttttttatcg agacctgcag gcatgcaagc tt 582

<210> 219
<211> 582
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 219
gaattcgagc tcggtacccg gggatcctct agagtcggct ttacacttta tgcttccggc 60

tcgtataatg tgtggaattg tgagcgctca caattgagct cagaggctta ctatgaagaa 120

atctctggtt cttaaggcta gcgttgctgt cgcgaccctg gtacctatgt tgtccttcgc 180

tcgtccggat ttctgtctcg agccaccata cactgggccc tgcaaagcgc gcatcatccg 240

ctatttctac aatgctaaag caggcctgtg ccagaccttt gtatacggtg gttgccgtgc 300

taagcgtaac aactttaaat cggccgaaga ttgcatgcgt acctgcggtg gcgccgctga 360

aggtgatgat ccggccaagg cggccttcaa ttctctgcaa gcttctgcta ccgagtatat 420

tggttacgcg tgggccatgg tggtggttat cgttggtgct accatcggga tcaaactgtt 480

caagaagttt acttcgaagg cgtcttaatg atagggttac cagtctaagc ccgcctaatg 540

agcgggcttt ttttttatcg agacctgcag gcatgcaagc tt 582

<210> 220
<211> 134
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (132)..(132)
<223> where Xaa is a stop encoded by TAA

<220>
<221> MISC_FEATURE
<222> (133)..(133)
<223> where Xaais a stop encoded by TGA

<220>
<221> MISC_FEATURE
<222> (134)..(134)
<223> where Xaa is a stop encoded by TAG

<400> 220

```
Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
1               5                  10                  15

Val Pro Met Leu Ser Phe Ala Arg Pro Asp Phe Cys Leu Glu Pro Pro
            20                  25                  30

Tyr Thr Gly Pro Cys Lys Ala Arg Ile Ile Arg Tyr Phe Tyr Asn Ala
        35                  40                  45

Lys Ala Gly Leu Cys Gln Thr Phe Val Tyr Gly Gly Cys Arg Ala Lys
    50                  55                  60

Arg Asn Asn Phe Lys Ser Ala Glu Asp Cys Met Arg Thr Cys Gly Gly
65                  70                  75                  80

Ala Ala Glu Gly Asp Asp Pro Ala Lys Ala Ala Phe Asn Ser Leu Gln
                85                  90                  95

Ala Ser Ala Thr Glu Tyr Ile Gly Tyr Ala Trp Ala Met Val Val Val
            100                 105                 110

Ile Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr Ser
        115                 120                 125

Lys Ala Ser Xaa Xaa Xaa
    130
```

<210> 221
<211> 554
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 221
ggatcctcta gagtcggctt tacactttat gcttccggct cgtataatgt gtggaattgt 60

gagcgctcac aattgagctc agaggcttac tatgaagaaa tctctggttc ttaaggctag 120

cgttgctgtc gcgaccctgg tacctatgtt gtccttcgct cgtccggatt tctgtctcga 180

gccaccatac actgggccct gcaaagcgcg catcatccgc tatttctaca atgctaaagc 240

aggcctgtgc cagacctttg tatacggtgg ttgccgtgct aagcgtaaca actttaaatc 300

ggccgaagat tgcatgcgta cctgcggtgg cgccgctgaa ggtgatgatc cggccaaggc 360

ggccttcaat tctctgcaag cttctgctac cgagtatatt ggttacgcgt gggccatggt 420

ggtggttatc gttggtgcta ccatcgggat caaactgttc aagaagttta cttcgaaggc 480

gtcttaatga tagggttacc agtctaagcc cgcctaatga cgggcttttt ttttatcgag 540

acctgcaggc atgc 554

<210> 222
<211> 134
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (132)..(132)
<223> where Xaa is a stop encoded by TAA

<220>
<221> MISC_FEATURE
<222> (133)..(133)
<223> where Xaais a stop encoded by TGA

<220>
<221> MISC_FEATURE
<222> (134)..(134)
<223> where Xaa is a stop encoded by TAG

<400> 222

Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
1 5 10 15

Val Pro Met Leu Ser Phe Ala Arg Pro Asp Phe Cys Leu Glu Pro Pro
20 25 30

Tyr Thr Gly Pro Cys Lys Ala Arg Ile Ile Arg Tyr Phe Tyr Asn Ala
35 40 45

Lys Ala Gly Leu Cys Gln Thr Phe Val Tyr Gly Gly Cys Arg Ala Lys
50 55 60

Arg Asn Asn Phe Lys Ser Ala Glu Asp Cys Met Arg Thr Cys Gly Gly
65 70 75 80

Ala Ala Glu Gly Asp Asp Pro Ala Lys Ala Ala Phe Asn Ser Leu Gln
85 90 95

Ala Ser Ala Thr Glu Tyr Ile Gly Tyr Ala Trp Ala Met Val Val Val
100 105 110

Ile Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr Ser
115 120 125

Lys Ala Ser Xaa Xaa Xaa
130

<210> 223
<211> 577
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 223
ggatcctcta gagtcggctt tacactttat gcttccggct cgtataatgt gtggaattgt 60

gagcgctcac aattgagctc agaggcttac tatgaagaaa tctctggttc ttaaggctag 120

cgttgctgtc gcgaccctgg tacctatgtt gtccttcgct cgtccggatt tctgtctcga 180

gccaccatac actgggccct gcaaagcgcg catcatccgc tatttctaca atgctaaagc 240

aggcctgtgc cagacctttg tatacggtgg ttgccgtgct aagcgtaaca actttaaatc 300

ggccgaagat tgcatgcgta cctgcggtgg cgccgctgaa ggtgatgatc cggccaaggc 360

ggccttcaat tctctgcaag cttctgctac cgagtatatt ggttacgcgt gggccatggt 420

ggtggttatc gttggtgcta ccatcgggat caaactgttc aagaagttta cttcgaaggc 480

gtcttaatga tagggttacc agtctaagcc cgcctaatga cgggcttttt ttttatcgag 540

acctgcaggc atgcgacctg caggtcgacc ggcatgc 577

<210> 225
<211> 525
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 225
ggctttacac tttatgcttc cggctcgtat aatgtgtgga attgtgagcg ctcacaattg 60

agctcagagg cttactatga agaaatctct ggttcttaag gctagcgttg ctgtcgcgac 120

cctggtacct atgttgtcct tcgctcgtcc ggatttctgt ctcgagccac catacactgg 180

gccctgcaaa gcgcgcatca tccgctattt ctacaatgct aaagcaggcc tgtgccagac 240

ctttgtatac ggtggttgcc gtgctaagcg taacaacttt aaatcggccg aagattgcat 300

gcgtacctgc ggtggcgccg ctgaaggtga tgatccggcc aaggcggcct tcaattctct 360

gcaagcttct gctaccgagt atattggtta cgcgtgggcc atggtggtgg ttatcgttgg 420

tgctaccatc gggatcaaac tgttcaagaa gtttacttcg aaggcgtctt aatgataggg 480

ttaccagtct aagcccgcct aatgagcggg ctttttttt atcga 525

<210> 226
<211> 68
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 226
ggctttacac tttatgcttc cggctcgtat aatgtgtgga attgtgagcg ctcacaattg 60

agctcagg 68

<210> 227
<211> 67
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 227
aggcttacta tgaagaaatc tctggttctt aaggctagcg ttgctgtcgc gaccctggta 60

cctatgt 67

<210> 228
<211> 70
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 228
tgtccttcgc tcgtccggat ttctgtctcg agccaccata cactgggccc tgcaaagcgc 60

gcatcatccg 70

<210> 229
<211> 67
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 229
ctatttctac aatgctaaag caggcctgtg ccagaccttt gtatacggtg gttgccgtgc 60

taagcgt 67

<210> 230
<211> 76
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 230
aacaacttta aatcggccga agattgcatg cgtacctgcg gtggcgccgc tgaaggtgat 60

gatccggcca aggcgg 76

<210> 231
<211> 67
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 231
ccttcaattc tctgcaagct tctgctaccg agtatattgg ttacgcgtgg gccatggtgg 60

tggttat 67

<210> 232
<211> 69
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 232
cgttggtgct accatcggga tcaaactgtt caagaagttt acttcgaagg cgtcttaatg 60

atagggtta 69

<210> 233
<211> 38
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 233
ccagtctaag cccgcctaat gagcgggctt tttttta 38

<210> 234
<211> 29
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 234
tcgataaaaa aaaagcccgc tcattaggc 29

<210> 235
<211> 69
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 235
gggcttagac tggtaaccct atcattaaga cgccttcgaa gtaaacttct tgaacagttt 60

gatcccgat 69

<210> 236
<211> 65
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 236
ggtagcacca acgataacca ccaccatggc ccacgcgtaa ccaatatact cggtagcaga 60

agctt 65

<210> 237
<211> 76
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 237
gcagagaatt gaaggccgcc ttggccggat catcaccttc agcggcgcca ccgcaggtac 60

gcatgcaatc ttcggc 76

<210> 238
<211> 67
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 238
cgatttaaag ttgttacgct tagcacggca accaccgtat acaaaggtct ggcacaggcc 60

tgcttta 67

<210> 239
<211> 70
<212> DNA
<213> Artificial sequence

<220>

<223> synthetic oligonucleotide

<400> 239
gcattgtaga aatagcggat gatgcgcgct ttgcagggcc cagtgtatgg tggctcgaga 60

cagaaatccg 70

<210> 240
<211> 65
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 240
cgagcgaagg acaacatagg taccagggtc gcgacagcaa cgctagcctt aagaaccaga 60

gattt 65

<210> 241
<211> 68
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 241
cttcatagta agcctcctga gctcaattgt gagcgctcac aattccacac attatacgag 60

ccggaagc 68

<210> 242
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 242
aggcttacta tgaag 15

<210> 243
<211> 13
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 243
tgtccttcgc tcg 13

<210> 244
<211> 15

<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 244
ctatttctac aatgc 15

<210> 245
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 245
aacaacttta aatcg 15

<210> 246
<211> 15
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 246
ccttcaattc tctgc 15

<210> 247
<211> 13
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 247
cgttggtgct acc 13

<210> 248
<211> 13
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 248
ccagtctaag ccc 13

<210> 249
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 249

Met Lys Gln Ser Thr Ile Ala Leu Ala Leu Leu Pro Leu Leu Phe Thr
1 5 10 15

Pro Val Thr Lys Ala Arg Thr
20

<210> 250
<211> 28
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 250

Met Lys Ile Lys Thr Gly Ala Arg Ile Leu Ala Leu Ser Ala Leu Thr
1 5 10 15

Thr Met Met Phe Ser Ala Ser Ala Leu Ala Lys Ile
20 25

<210> 251
<211> 24
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic pepetide

<400> 251

Met Met Lys Arg Asn Ile Leu Ala Val Ile Val Pro Ala Leu Leu Val
1 5 10 15

Ala Gly Thr Ala Asn Ala Ala Glu
20

<210> 252
<211> 25
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 252

Met Ser Ile Gln His Phe Arg Val Ala Leu Ile Pro Phe Phe Ala Ala
1 5 10 15

Phe Cys Leu Pro Val Phe Ala His Pro
20 25

<210> 253
<211> 27
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 253

Met Met Ile Thr Leu Arg Lys Leu Pro Leu Ala Val Ala Val Ala Ala
1 5 10 15

Gly Val Met Ser Ala Gln Ala Met Ala Val Asp
20 25

<210> 254
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 254

Met Lys Ala Thr Lys Leu Val Leu Gly Ala Val Ile Leu Gly Ser Thr
1 5 10 15

Leu Leu Ala Gly Cys Ser
20

<210> 255
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 255

Met Lys Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser
1 5 10 15

His Ser Ala Glu Thr Val Glu
20

<210> 256
<211> 21

<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 256

Met Lys Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser
1 5 10 15

Gly Ala Arg Pro Asp
20

<210> 257
<211> 28
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 257

Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
1 5 10 15

Val Pro Met Leu Ser Phe Ala Ala Glu Gly Asp Asp
20 25

<210> 258
<211> 26
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 258

Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
1 5 10 15

Val Pro Met Leu Ser Phe Ala Arg Pro Asp
20 25

<210> 259
<211> 28
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 259

Met Lys Lys Ser Leu Val Leu Leu Ala Ser Val Ala Val Ala Thr Leu
1 5 10 15

Val Pro Met Leu Ser Phe Ala Ala Glu Gly Asp Asp
20 25

<210> 260
<211> 1302
<212> DNA
<213> M13

<400> 260
gtgaaaaaat tattattcgc aattccttta gttgttcctt tctattctca ctccgctgaa 60

actgttgaaa gttgtttagc aaaaccccat acagaaaatt catttactaa cgtctggaaa 120

gacgacaaaa ctttagatcg ttacgctaac tatgagggtt gtctgtggaa tgctacaggc 180

gttgtagttt gtactggtga cgaaactcag tgttacggta catgggttcc tattgggctt 240

gctatccctg aaaatgaggg tggtggctct gagggtggcg gttctgaggg tggcggttct 300

gagggtggcg gtactaaacc tcctgagtac ggtgatacac ctattccggg ctatacttat 360

atcaaccctc tcgacggcac ttatccgcct ggtactgagc aaaaccccgc taatcctaat 420

ccttctcttg aggagtctca gcctcttaat actttcatgt ttcagaataa taggttccga 480

aataggcagg gggcattaac tgtttatacg ggcactgtta ctcaaggcac tgaccccgtt 540

aaaacttatt accagtacac tcctgtatca tcaaaagcca tgtatgacgc ttactggaac 600

ggtaaattca gagactgcgc tttccattct ggctttaatg aggatccatt cgtttgtgaa 660

tatcaaggcc aatcgtctga cctgcctcaa cctcctgtca atgctggcgg cggctctggt 720

ggtggttctg gtggcggctc tgagggtggt ggctctgagg gtggcggttc tgagggtggc 780

ggctctgagg gaggcggttc cggtggtggc tctggttccg gtgattttga ttatgaaaag 840

atggcaaacg ctaataaggg ggctatgacc gaaaatgccg atgaaaacgc gctacagtct 900

gacgctaaag gcaaacttga ttctgtcgct actgattacg gtgctgctat cgatggtttc 960

attggtgacg tttccggcct tgctaatggt aatggtgcta ctggtgattt tgctggctct 1020

aattcccaaa tggctcaagt cggtgacggt gataattcac ctttaatgaa taatttccgt 1080

caatatttac cttccctccc tcaatcggtt gaatgtcgcc cttttgtctt tagcgctggt 1140

aaaccatatg aattttctat tgattgtgac aaaataaact tattccgtgg tgtctttgcg 1200

tttcttttat atgttgccac ctttatgtat gtattttcta cgtttgctaa catactgcgt 1260

aataaggagt cttaatcatg ccagttcttt tgggtattcc gt 1302

<210> 261
<211> 66

<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 261
gtgaaaaaat tattattcgc aattccttta gttgttcctt tctattctca ctccgctgaa 60

actgtt 66

<210> 262
<211> 22
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 262

Met Lys Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser
1 5 10 15

His Ser Ala Glu Thr Val
20

<210> 263
<211> 66
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 263
gtgaaaaaat tattattcgc aattccttta gttgttcctt tctattctgg cgccgctgaa 60

actgtt 66

<210> 264
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 264

Met Lys Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser
1 5 10 15

Gly Ala Glu Thr Val
20

<210> 265
<211> 77
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (77)..(77)
<223> where Xaa is a stop encoded by TAA

<400> 265

Met Lys Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser
1 5 10 15

Gly Ala Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys
20 25 30

Lys Ala Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys
35 40 45

Gln Thr Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys
50 55 60

Ser Ala Glu Asp Cys Met Arg Thr Cys Gly Gly Ala Xaa
65 70 75

<210> 266
<211> 1480
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 266
gtgaaaaaat tattattcgc aattccttta gttgttcctt tctattctgg cgcccgtccg 60

gatttctgtc tcgagcccat acactgggcc ctgcaaagcg cgcatcatcc gctatttcta 120

caatgctaaa gcaggcctgt gccagacctt tgtatacggt ggttgccgtg ctaagcgtaa 180

caactttaaa tcggccgaag attgcatgcg tacctgcggt ggcgccggcg ccgctgaaac 240

tgttgaaagt tgtttagcaa aaccccatac agaaaattca tttactaacg tctggaaaga 300

cgacaaaact ttagatcgtt acgctaacta tgagggttgt ctgtggaatg ctacaggcgt 360

tgtagtttgt actggtgacg aaactcagtg ttacggtaca tgggttccta ttgggcttgc 420

tatccctgaa aatgagggtg gtggctctga gggtggcggt tctgagggtg gcggttctga 480

gggtggcggt actaaacctc ctgagtacgg tgatacacct attccgggct atacttatat 540

caaccctctc gacggcactt atccgcctgg tactgagcaa aaccccgcta atcctaatcc 600

ttctcttgag gagtctcagc ctcttaatac tttcatgttt cagaataata ggttccgaaa 660

taggcagggg gcattaactg tttatacggg cactgttact caaggcactg accccgttaa 720

aacttattac cagtacactc ctgtatcatc aaaagccatg tatgacgctt actggaacgg 780

taaattcaga gactgcgctt tccattctgg ctttaatgag gatccattcg tttgtgaata 840

tcaaggccaa tcgtctgacc tgcctcaacc tcctgtcaat gctggcggcg gctctggtgg 900

tggttctggt ggcggctctg agggtggtgg ctctgagggt ggcggttctg agggtggcgg 960

ctctgaggga ggcggttccg gtggtggctc tggttccggt gattttgatt atgaaaagat 1020

ggcaaacgct aataaggggg ctatgaccga aaatgccgat gaaaacgcgc tacagtctga 1080

cgctaaaggc aaacttgatt ctgtcgctac tgattacggt gctgctatcg atggtttcat 1140

tggtgacgtt tccggccttg ctaatggtaa tggtgctact ggtgattttg ctggctctaa 1200

ttcccaaatg gctcaagtcg gtgacggtga taattcacct ttaatgaata atttccgtca 1260

atatttacct tccctccctc aatcggttga atgtcgccct tttgtcttta gcgctggtaa 1320

accatatgaa ttttctattg attgtgacaa aataaactta ttccgtggtg tctttgcgtt 1380

tcttttatat gttgccacct ttatgtatgt attttctacg tttgctaaca tactgcgtaa 1440

taaggagtct taatcatgcc agttcttttg ggtattccgt 1480

<210> 267
<211> 215
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 267
ggatccactc cccatccccc tgttgacaat taatcatcgg ctcgtataat gtgtggaatt 60

gtgagcgctc acaattgagc tctggaggaa ataaaatgaa gaaatctctg gttcttaagg 120

ctagcgttgc tgtcgcgacc ctggtaccta tgttgtcctt cgctcgtccg gatttctgtc 180

tcgagccacc atacactggg ccctgcaaag cgcgc 215

<210> 268
<211> 134
<212> PRT
<213> Bos taurus

<220>
<221> MISC_FEATURE
<222> (132)..(132)
<223> where Xaa is a stop encoded by TAA

<220>
<221> MISC_FEATURE
<222> (133)..(133)
<223> where Xaa is a stop encoded by TGA

<220>
<221> MISC_FEATURE
<222> (134)..(134)
<223> where Xaa is a stop encoded by TAG

<400> 268

Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
1 5 10 15

Val Pro Met Leu Ser Phe Ala Arg Pro Asp Phe Cys Leu Glu Pro Pro
20 25 30

Tyr Thr Gly Pro Cys Lys Ala Arg Ile Ile Arg Tyr Phe Tyr Asn Ala
35 40 45

Lys Ala Gly Leu Cys Gln Thr Phe Val Tyr Gly Gly Cys Arg Ala Lys
50 55 60

Arg Asn Asn Phe Lys Ser Ala Glu Asp Cys Met Arg Thr Cys Gly Gly
65 70 75 80

Ala Ala Glu Gly Asp Asp Pro Ala Lys Ala Ala Phe Asn Ser Leu Gln
85 90 95

Ala Ser Ala Thr Glu Tyr Ile Gly Tyr Ala Trp Ala Met Val Val Val
100 105 110

Ile Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr Ser
115 120 125

Lys Ala Ser Xaa Xaa Xaa
130

<210> 269
<211> 543
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 269
ggaggaaata aactgttgac aattaatcat cggctcgtat aatgtgtgga attgtgagcg 60

ctcacaattg agctccatgg gagaaaataa aatgaaacaa agcacgatcg cactcttacc 120

gttactgttt acccctgtga caaaagcccg tccggatttc tgtctcgagc caccatacac 180

tgggccctgc aaagcgcgca tcatccgcta tttctacaat gctaaagcag gcctgtgcca 240

gacctttgta tacggtggtt gccgtgctaa gcgtaacaac tttaaatcgg ccgaagattg 300

catgcgtacc tgcggtggcg ccgctgaagg tgatgatccg gccaaggcgg ccttcaattc 360

tctgcaagct tctgctaccg agtatattgg ttacgcgtgg gccatggtgg tggttatcgt 420

tggtgctacc atcgggatca aactgttcaa gaagtttact tcgaaggcgt cttaatgata 480

gggttaccag tctaagcccg cctaatgagc gggctttttt tttatcgaga cctgcaggtc 540

gac 543

<210> 271
<211> 1480
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 271
gtgaaaaaat tattattcgc aattccttta gttgttcctt tctattctgg cgcccgtccg 60

gatttctgtc tcgagcccat acactgggcc ctgcaaagcg cgcatcatcc gctatttcta 120

caatgctaaa gcaggcctgt gccagacctt tgtatacggt ggttgccgtg ctaagcgtaa 180

caactttaaa tcggccgaag attgcatgcg tacctgcggt ggcgccggcg ccgctgaaac 240

tgttgaaagt tgtttagcaa aaccccatac agaaaattca tttactaacg tctggaaaga 300

cgacaaaact ttagatcgtt acgctaacta tgagggttgt ctgtggaatg ctacaggcgt 360

tgtagtttgt actggtgacg aaactcagtg ttacggtaca tgggttccta ttgggcttgc 420

tatccctgaa aatgagggtg gtggctctga gggtggcggt tctgagggtg gcggttctga 480

gggtggcggt actaaacctc ctgagtacgg tgatacacct attccgggct atacttatat 540

caaccctctc gacggcactt atccgcctgg tactgagcaa aaccccgcta atcctaatcc 600

ttctcttgag gagtctcagc ctcttaatac tttcatgttt cagaataata ggttccgaaa 660

taggcagggg gcattaactg tttatacggg cactgttact caaggcactg accccgttaa 720

aacttattac cagtacactc ctgtatcatc aaaagccatg tatgacgctt actggaacgg 780

taaattcaga gactgcgctt tccattctgg ctttaatgag gatccattcg tttgtgaata 840

tcaaggccaa tcgtctgacc tgcctcaacc tcctgtcaat gctggcggcg gctctggtgg 900

tggttctggt ggcggctctg agggtggtgg ctctgagggt ggcggttctg agggtggcgg 960

ctctgaggga ggcggttccg gtggtggctc tggttccggt gattttgatt atgaaaagat 1020

ggcaaacgct aataaggggg ctatgaccga aaatgccgat gaaaacgcgc tacagtctga 1080

cgctaaaggc aaacttgatt ctgtcgctac tgattacggt gctgctatcg atggtttcat 1140

tggtgacgtt tccggccttg ctaatggtaa tggtgctact ggtgattttg ctggctctaa 1200

ttcccaaatg gctcaagtcg gtgacggtga taattcacct ttaatgaata atttccgtca 1260

atatttacct tccctccctc aatcggttga atgtcgccct tttgtcttta gcgctggtaa 1320

accatatgaa ttttctattg attgtgacaa aataaactta ttccgtggtg tctttgcgtt 1380

tcttttatat gttgccacct ttatgtatgt attttctacg tttgctaaca tactgcgtaa 1440

taaggagtct taatcatgcc agttcttttg ggtattccgt 1480

<210> 272
<211> 77
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<220>
<221> MISC_FEATURE
<222> (77)..(77)
<223> where Xaa is a stop encoded by TAA

<400> 272

Met Lys Lys Leu Leu Phe Ala Ile Pro Leu Val Val Pro Phe Tyr Ser
1 5 10 15

Gly Ala Arg Pro Asp Phe Cys Leu Glu Pro Pro Tyr Thr Gly Pro Cys
20 25 30

Lys Ala Arg Ile Ile Arg Tyr Phe Tyr Asn Ala Lys Ala Gly Leu Cys
35 40 45

Gln Thr Phe Val Tyr Gly Gly Cys Arg Ala Lys Arg Asn Asn Phe Lys
50 55 60

Ser Ala Glu Asp Cys Met Arg Thr Cys Gly Gly Ala Xaa
65 70 75

<210> 273
<211> 131
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 273

Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu
1 5 10 15

```
Val Pro Met Leu Ser Phe Ala Arg Pro Asp Phe Cys Leu Glu Pro Pro
            20                  25                  30

Tyr Thr Gly Pro Cys Lys Ala Arg Ile Ile Arg Tyr Phe Tyr Asn Ala
        35                  40                  45

Lys Ala Gly Leu Cys Gln Thr Phe Val Tyr Gly Gly Cys Arg Ala Lys
    50                  55                  60

Arg Asn Asn Phe Lys Ser Ala Glu Asp Cys Met Arg Thr Cys Gly Gly
65                  70                  75                  80

Ala Ala Glu Gly Asp Asp Pro Ala Lys Ala Ala Phe Asn Ser Leu Gln
                85                  90                  95

Ala Ser Ala Thr Glu Tyr Ile Gly Tyr Ala Trp Ala Met Val Val Val
            100                 105                 110

Ile Val Gly Ala Thr Ile Gly Ile Lys Leu Phe Lys Lys Phe Thr Ser
        115                 120                 125

Lys Ala Ser
    130
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<210> 274
<211> 23
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 274

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Gly Glu Asn Glu Gly Cys Asp Thr Glu Gly Lys Ala Lys Asn Gly Gly
1               5                   10                  15

Gly Ser Tyr Gly Tyr Cys Tyr
            20
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<210> 275
<211> 21
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 275

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Met Lys Gln Ser Thr Ile Ala Leu Ala Leu Leu Pro Leu Leu Phe Thr
1               5                   10                  15
```

Pro Val Thr Lys Ala
20

<210> 276
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 276
tcgcgggcgc tcgagacaga a 21

<210> 277
<211> 4
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 277

Leu Lys Lys Ser
1

<210> 278
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 278

Leu Ser Ser Ser Gly
1 5

<210> 279
<211> 27
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 279
ggcgagggag gaggatccgg atcctcc 27

<210> 280
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 280

Glu Gly Gly Gly Ser Gly Ser Ser
1 5

<210> 281
<211> 99
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 281
ccgtccgtcg gaccgtatcc aggctttaca ctttatgctt ccggctcgta taatgtgtgg 60

aattgtgagc ggataacaat tcctagggcc gctccttcg 99

<210> 282
<211> 99
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 282
gcaccaacgc ctaggaggct cactatgaag aaatctctgg ttcttaaggc tagcgttgct 60

gtcgcgaccc tggtaccgat gctgtctttt gctcgtccg 99

<210> 283
<211> 93
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 283
ccctgcacag cgcgcatcat ccgttatttc tacaacgcta aagcaggcct gtgccagacc 60

tttgtatacg gtggttgccg tgctaagcgt aac 93

<210> 284
<211> 100
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 284

cctcgccctg gcgccgctga aggtgatgat ccggccaaag cggcctttaa ctctctgcaa 60

gcttctgcta ccgaatatat cggttacgcg tgggccatgg 100

<210> 285
<211> 94
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (18)..(18)
<223> where n has an equal probability of bein C or A

<220>
<221> misc_feature
<222> (19)..(19)
<223> where n has an equal probability of bein G or A

<220>
<221> misc_feature
<222> (27)..(27)
<223> where n has an equal probability of bein G or A

<220>
<221> misc_feature
<222> (28)..(28)
<223> where n has an equal probability of bein T or A

<220>
<221> misc_feature
<222> (33)..(33)
<223> where n has an equal probability of bein G or A

<220>
<221> misc_feature
<222> (34)..(34)
<223> where n has an equal probability of bein C, G, or A

<220>
<221> misc_feature
<222> (35)..(35)
<223> where n has an equal probability of being T or G

<220>
<221> misc_feature
<222> (37)..(37)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (57)..(57)
<223> where n has an equal probability of bein T or A

<220>
<221> misc_feature

<222> (57)..(57)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (58)..(58)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (59)..(59)
<223> where n has an equal probability of being T or G

<220>
<221> misc_feature
<222> (66)..(66)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<220>
<221> misc_feature
<222> (67)..(67)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (68)..(68)
<223> where n has an equal probability of being T or G

<220>
<221> misc_feature
<222> (69)..(69)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (70)..(70)
<223> where n can be any nucleotide with the following probabilities:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (71)..(71)
<223> where n has an equal probability of being T or G

<220>
<221> misc_feature
<222> (79)..(79)
<223> where n can be any nucleotide with the following probabilities:
(.26 T, .18 C, .26 A, and .30 G)

<400> 285
cggcacgcgg gccctgcnna gcggatnnac agnnntnttt ctacaacgct aaagagnnnc 60

tgtgcnnnnn nttttcgtac ggtggttgcc gtgc 94

<210> 286
<211> 71

<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (18)..(18)
<223> where n has an equal probability of being A, C, or G

<220>
<221> misc_feature
<222> (19)..(19)
<223> where n has an equal probability of being A or C

<220>
<221> misc_feature
<222> (24)..(24)
<223> where n has an equal probability of being A, C, or G

<220>
<221> misc_feature
<222> (25)..(25)
<223> where n has an equal probability of being A or C

<220>
<221> misc_feature
<222> (42)..(42)
<223> where n can be any nucleotide with the following probabilites:
(.26 T, .18 C, .26 A, and .30 G

<220>
<221> misc_feature
<222> (43)..(43)
<223> where n can be any nucleotide with the following probabilites:
(.22 T, .16 C, .40 A, and .22 G)

<220>
<221> misc_feature
<222> (44)..(44)
<223> where n has an equal probability of being T or G

<220>
<221> misc_feature
<222> (55)..(55)
<223> where n has an equal probability of being A, T or G

<220>
<221> misc_feature
<222> (56)..(56)
<223> where n has an equal probability of being T or G

<400> 286
cgagcctgct cgagccgnng tatnnggggc cctgcgaggc gnnngttcag aattnnttct 60

acaacgccaa g 71

<210> 287
<211> 13

<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (4)..(10)
<223> where n can be any nucleotide

<400> 287
ccannnnnnn tgg 13

<210> 288
<211> 13
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<220>
<221> misc_feature
<222> (5)..(9)
<223> where n can be any nucleotide

<400> 288
ggccnnnnng gcc 13

<210> 289
<211> 12
<212> DNA
<213> Artificial sequence

<220>
<223> synthetic oligonucleotide

<400> 289
ggaggaaata aa 12

<210> 290
<211> 8
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 290

Pro Cys Val Ala Met Phe Gln Arg
1 5

<210> 291
<211> 9

<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 291

Pro Cys Val Gly Phe Phe Ser Arg Tyr
1 5

<210> 292
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 292

Pro Cys Val Gly Phe Phe Gln Arg Tyr
1 5

<210> 293
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 293

Pro Cys Val Ala Met Phe Pro Arg Tyr
1 5

<210> 294
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 294

Pro Cys Val Ala Ile Phe Pro Arg Tyr
1 5

<210> 295
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 295

Pro Cys Val Ala Ile Phe Lys Arg Ser
1 5

<210> 296
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 296

Pro Cys Ile Ala Phe Phe Pro Arg Tyr
1 5

<210> 297
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 297

Pro Cys Ile Ala Phe Phe Gln Arg Tyr
1 5

<210> 298
<211> 9
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 298

Pro Cys Ile Ala Leu Phe Lys Arg Tyr
1 5

<210> 299
<211> 15
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 299

Ala Ala Ala Gly Cys Gly Cys Gly Cys Ala Thr Cys Ala Thr Cys
1 5 10 15

<210> 300

<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 300

Lys Ala Arg Ile Ile
1 5

<210> 301
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 301

Met Gly Phe Ser Lys
1 5

<210> 302
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 302

Met Ala Leu Phe Lys
1 5

<210> 303
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 303

Phe Ala Ile Thr Pro
1 5

<210> 304
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 304

Met Ala Leu Phe Gln
1 5

<210> 305
<211> 5
<212> PRT
<213> Artificial sequence

<220>
<223> synthetic peptide

<400> 305

Met Ala Ile Ser Pro
1 5